

P a t e n t   c l a i m s

1.

A trawl apparatus (1) equipped with a means for gathering seafood/biomass and conveying it to a seafood/biomass receiving vessel (3),  
characterised in

- that the trawl (1) is equipped with an elongate, preferably rigid or flexible collecting cage (5) which at an inlet opening (5') is connected to the rear end (1') of the trawl, and from the inlet opening extends into a second portion, defined by walls (9, 9'), roof (9'') and bottom (9''') which have openings for straining water, and is terminated in a downstream portion (5'', 5''');  
- that a conveying hose – or pipe (4; 16, 16') for conveying seafood/biomass from the collecting cage (5) to the vessel (3) opens into the downstream or aft portion (5'', 5''') of the cage (5) via a funnel (13; 17); and  
- that air or other fluid is supplied from the vessel (3) via a supply hose (6; 19) for injection into the conveying hose – or the pipe (4; 16), in order, by injector effect or fluid displacement technique, to cause suction of the seafood/biomass from the collecting cage (5) up to the vessel (3).

2.

An apparatus as disclosed in claim 1, characterised in

- that a sorting or filtering grille (12) is provided at the inlet opening (5') of the collecting cage (5) and is arranged to extend obliquely inwards and upwards, downwards and/or sideways in the collecting cage (5); and  
- that a portion (11) of the roof, bottom and/or walls of the collecting cage (5) located at a downstream end of the grille (12) is open, so that seafood/biomass, for example, fish, or foreign objects over a certain size do not pass through the grille (12) but are led through the at least one open portion (11) and away from the collecting cage (5).

3.

An apparatus as disclosed in claim 1 or 2, characterised in

- that the apertures in said walls, roof and bottom for straining water are formed of a self-cleaning grating or grille structure which may be rigid or flexible.

4.

An apparatus as disclosed in claim 1 or 2, characterised in

- that at least one wall, roof or bottom portion of the collecting cage is equipped with a mechanical device for effecting the cleaning of the grating or grille structure.

5 5.

An apparatus as disclosed in claim 1, 2, 3 or 4, characterised in

- that the collecting cage (5) is modularly constructed of joined sections (10).

6.

10 An apparatus as disclosed in one or more of claims 1-5,  
characterised in

- that the funnel is inside the cage (5), the mouth of the funnel (17) facing and spaced from an aft wall (9'') of the cage (5).

15 7.

An apparatus as disclosed in one or more of claims 1-6,  
characterised in

- that the supply of air or other fluid is, via the air supply hose (6), adapted to be injected at a point on the conveying hose or pipe (4) close to an area where the  
20 conveying hose or pipe (4) forms a marked upward gradient towards the surface of the sea.

8.

25 An apparatus as disclosed in one or more of claims 1-6,  
characterised in

- that the supply of air or other fluid is, via the supply hose (19), adapted to be injected via a, preferably depth-adjustable, injector (20) that is connected at a point on the conveying hose or pipe (16) in an upper area of the portion of the conveying hose or pipe (16) which has a marked upward gradient towards the  
30 surface of the sea.

9.

An apparatus as disclosed in one or more of claims 1-8,  
characterised in

- 35 - that in connection with, after or during the conveyance of the seafood/biomass from the collecting cage (5) to the vessel (3), there is provided a straining device (15') to separate seafood/biomass from seawater which accompanies it during

its conveyance from the collecting cage (5) to the vessel (3).

10. 10.

An apparatus as disclosed in claim 9,

5 characterised in

- that in connection with the straining device there is provided a deceleration device (15) which is designed to reduce the conveying rate of conveyed seafood/ biomass.

10 11.

An apparatus according to any one of claims 1-10,

characterised in

- that sensors (21) are provided on or in connection with the collecting cage (5) for monitoring the position/orientation of the collecting cage (5) in the water, 15 depth, water flow etc.